CONSTRUCTION
and OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

PC Indiana Synthetic Fuels #2, LLC
7244 Brammer Road,
Lynnville, IN 47619

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: CP173-10815-00041	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

TABLE OF CONTENTS

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a modification to a synthetic fuel pellet production and curing operation.

Authorized Individual:	Douglas E. Miller
Source Address:	7244 Brammer Road, Lynnville, IN 47619
Mailing Address:	PC Indiana Synthetic Fuels #2, LLC c/o Carbontronics Fuels Management, LLC, 236 E. Main St., Lexington, KY 40507
Phone Number:	606-252-1640
SIC Code:	2999
County Location:	Warrick
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, consisting of:
  (1) two (2) liquid propane gas fired vibrating curing furnaces using natural gas as a backup fuel, identified as Dryers #1 and #2, respectively, each with a maximum capacity of 65 tons of pellets per hour, each with a rated heat input of 40 million British thermal units (MMBtu) per hour, each using two (2) cyclones as an integral part of the process, and each exhausting collectively through one (1) scrubber to stack SV02a and SV02b, respectively;

(b) conveying for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons per hour, consisting of:
  (1) one (1) pellet conveyor, one (1) dry pellet conveyor, one (1) loadout conveyor identified as EP01, EP03, and EP06, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;

(c) unloading for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons per hour, consisting of:
  (1) two (2) collection hopper, identified as EP05 and EP07, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;
  (2) one (1) truck loading operation, identified as EP08, with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;

(d) conveying for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:
  (1) two (2) feed bins with variable speed feed conveyors, one (1) feed conveyor, one (1) mixer feed conveyor, two (2) pugmill conveyors, one (1) mixer product conveyor, two (2) pellet mill feed conveyors, one (1) finished product collecting conveyor, one (1) tripper conveyor, one (1) underpile reclaim conveyor, one (1) feed conveyor, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;

(e) unloading for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:
  (1) two (2) loading hoppers, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;

(f) screening for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:
  (1) one (1) plant protection screen, one (1) recycle material screen, one (1) plant protection screen, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively; and

(g) one (1) radial stacker, identified as EP04, for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22).

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

All requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 First Time Operation Permit [326 IAC 2-1-4]

That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees)

(e) Pursuant to 326 IAC 2-7-4 and 326 IAC 2-5.1-4, the Permittee shall apply for a Title V operating permit within twelve (12) months after the source becomes subject to Title V. This 12-month period starts at the postmarked submission date of the Affidavit of Construction. If the construction is completed in phases, the 12-month period starts at the postmarked submission date of the Affidavit of Construction that triggers the Title V applicability. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit PM is limited to less than 250 tons per twelve (12) month consecutive period. Therefore, the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that lack of proper maintenance does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of [326 IAC 2-6.1-6] whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Source Modification [326 IAC 2-7-10.5]

(a) The Permittee must comply with the requirements of [326 IAC 2-7-10.5] whenever the Permittee seeks to construct new emissions units, modify existing emissions units, or otherwise modify the source.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule.

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

(1) The Permittee may assert a claim that, in the opinion of the Permittee, information removed or about to be removed from the source by IDEM, OAM, or an authorized representative, contains information that is confidential under IC 5-14-3-4(a). The claim shall be made in writing before or at the time the information is removed from the source. In the event that a claim of confidentiality is so asserted, neither IDEM, OAM, nor an authorized representative, may disclose the information unless and until IDEM, OAM, makes a determination under 326 IAC 17-1-7 through 326 IAC 17-1-9 that the information is not entitled to confidential treatment and that determination becomes final. [IC 5-14-3-4; IC 13-14-11-3; 326 IAC 17-1-7 through 326 IAC 17-1-9]

(2) The Permittee, and IDEM, OAM, acknowledge that the federal law applies to claims of confidentiality made by the Permittee with regard to information removed or about to be removed from the source by U.S. EPA. [40 CFR Part 2, Subpart B]

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAM, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.8 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.9 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.10 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on March 23, 1998. The plan consists of:

(a) wet suppression of dust from unpaved haul roads on an as needed basis.

C.11 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

Testing Requirements

C.12 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.13 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend the compliance schedule an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date. The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.14 Maintenance of Monitoring Equipment [IC 13-14-1-13]

(a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.

(b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.15 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.16 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAM upon request and shall be subject to review and approval by IDEM, OAM. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.18 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.19 Annual Emission Statement [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.

(b) The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

The submittal by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.20 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.21 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that improper maintenance did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.22 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(15)]

(a) two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, consisting of:
  (1) two (2) liquid propane gas fired vibrating curing furnaces using natural gas as a backup fuel, identified as Dryers #1 and #2, respectively, each with a maximum capacity of 65 tons of pellets per hour, each with a rated heat input of 40 million British thermal units (MMBtu) per hour, each using two (2) cyclones as an integral part of the process, and each exhausting collectively through one (1) scrubber to stack SV02a and SV02b, respectively,

(b) conveying for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons per hour, consisting of:
  (1) one (1) pellet conveyor, one (1) dry pellet conveyor one loadout conveyor identified as EP01, EP03, and EP06, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively

(c) unloading for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons per hour, consisting of:
  (1) two (2) collection hopper, identified as EP05 and EP07, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively, and
  (2) one truck loading operation, identified as EP08, with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively.

(d) conveying for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:
  (1) two (2) feed bins with variable speed feed conveyors, one (1) feed conveyor, one (1) mixer feed conveyor, two (2) pugmill conveyors, one (1) mixer product conveyor, two (2) pellet mill feed conveyors, one (1) finished product collecting conveyor, one (1) tripper conveyor, one (1) underpile reclaim conveyor, one (1) feed conveyor, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively,

(e) unloading for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:
  (1) two (2) loading hoppers, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively,

(f) screening for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:
  (1) one (1)plant protection screen, one (1) recycle material screen, one (1) plant protection screen, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively,

(g) one (1) radial stacker, identified as EP04, for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively.

Emission Limitations and Standards

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The particulate matter (PM) from the synthetic fuel pellet production and curing operation shall be limited by the following:

The allowable emissions for each facility are as follows:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

Emission Unit	Process Weight Rate (tons/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
synthetic fuel pellet production and curing operation, EP02a	65.00	47.05
synthetic fuel pellet production and curing operation, EP02b	65.00	47.05
Radial Stacker	130.00	53.95
Screens	130.00	53.95
Existing Loading	130.00	53.95
New Loading	130.00	53.95
Existing Conveyors	130.00	53.95
New Conveyors	130.00	53.95

The synthetic fuel pellet production and curing operation utilizes wet scrubbers for particulate matter control on the other emission units to comply with 326 IAC 6-3-2 (Process Operations), and the PM emissions from the rest of the source are in compliance with 326 IAC 6-3-2

D.1.2 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

The dual cyclones and wet scrubber for the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b shall be in operation at all times. These PM control devices are required to limit the potential to emit of PM to less than 250 tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this emissions unit and any control devices.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-1.1-11]

That pursuant to 326 IAC 326 IAC 2-1.1-11 (Compliance Requirements) compliance stack tests shall be performed for PM and PM-10 emissions from one (1) of the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.

(a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.

(b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.

(c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.

(d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

(e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days.

D.1.5 Particulate Matter (PM)

The dual cyclones and wet scrubber for PM control shall be in operation at all times when the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.6 Visible Emissions Notations

(a) Daily visible emission notations of the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the wet scrubbers used in conjunction with the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, at least once daily when the two (2) synthetic fuel pellet production and curing operations are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubbers shall be maintained above 11.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.1.8 Failure Detection

In the event that scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b stack exhaust.

(b) To document compliance with Condition D.1.7, the Permittee shall maintain the following as pertains to the wet scrubbers:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Pressure drop across the wet scrubbers.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: PC Indiana Synthetic Fuels #2, LLC PHONE NO. (606) 252-1640
LOCATION: (CITY AND COUNTY) Lynnville, IN Warrick County
PERMIT NO. 173-10815-00041 AFS PLANT ID: 173-00041 AFS POINT ID: _____ INSP: Dave Holder
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 19____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:_____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document (TSD) for a Construction Permit

Source Background and Description

Source Name:	**PC Indiana Synthetic Fuels #2, LLC**
Source Location:	**7244 Brammer Road, Lynnville, IN 47619**
County:	**Warrick**
SIC Code:	**2999**
Operation Permit No.:	**173-10815-00041**
Permit Reviewer:	**Phillip Ritz**

On June 24, 1999, the Office of Air Management (OAM) had a notice published in the Boonville Standard, Boonville, Indiana, stating that PC Indiana Synthetic Fuels #2, LLC had applied for a construction permit to construct and operate a modification to a synthetic fuel pellet production and curing operation. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On July 23, 1999, John T. Kelley submitted comments on the proposed construction permit on behalf of PC Indiana Synthetic Fuels #2, LLC. The summary of the comments and corresponding responses are as follows (changes in **bold** or ~~strikeout~~ for emphasis):

Comment 1

On page 4 of 24, Source Summary, Section A.2(a)(1): To clarify the equipment at the proposed facility, please modify this paragraph to read ". . . million British thermal units (mmBtu) per hour, each using ~~one of~~ two (2) cyclones as an integral part of the process, and **each** exhausting . . . "

Response 1

To correct the unit description, the following changes have been made to Section A.2(a)(1):

(a) two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, consisting of:

(1) two (2) liquid propane gas fired vibrating curing furnaces using natural gas as a backup fuel, identified as Dryers #1 and #2, respectively, each with a maximum capacity of 65 tons of pellets per hour, each with a rated heat input of 40 million British thermal units (mmBtu) per hour, each using ~~one of~~ two (2) cyclones as an integral part of the process, and **each** exhausting collectively through one (1) scrubber to stack SV02a and SV02b, respectively;

Comment 2

On page 18 of 24, Emissions Unit Operation Conditions, Section D.1(a)(1): To clarify the equipment at the proposed facility, please modify this paragraph to read ". . . million British thermal units (MMBTU) per hour, each using ~~one of~~ two (2) cyclones as an integral part of the process, and **each** exhausting . . . "

Response 2

To correct the unit description, the following changes have been made to Section D.1(a)(1):

(a) two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, consisting of:

(1) two (2) liquid propane gas fired vibrating curing furnaces using natural gas as a backup fuel, identified as Dryers #1 and #2, respectively, each with a maximum capacity of 65 tons of pellets per hour, each with a rated heat input of 40 million British thermal units (mmBtu) per hour, each using ~~one of~~ two (2) cyclones as an integral part of the process, and **each** exhausting collectively through one (1) scrubber to stack SV02a and SV02b, respectively,

Comment 3

On page 20 of 24, Emissions Unit Operation Conditions, Section D.1.7(a): To clarify the equipment at the proposed facility, please modify this paragraph to read "The Permittee shall record the total static pressure drop across the wet scrubber**s**"

Response 3

To correct the unit description, the following changes have been made to Section D.1.7(a):

~~(a)~~ The Permittee shall record the total static pressure drop across the wet scrubber**s** used in conjunction with the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, at least once daily when the two (2) synthetic fuel pellet production and curing operations are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the wet scrubber**s** shall be maintained above 11.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

Comment 4

On page 21 of 24, Emissions Unit Operation Conditions, Section D.1.7(b): Because the dual cyclones for each furnace are considered an integral part of the process, not control devices, no parametric monitoring should be required. For this reason, delete the entire paragraph D.1.7(b);

Response 4

Compliance does require parametric monitoring of the integral control device when venting to the atmosphere. Since the dual cyclones vent to the scrubbers, monitoring of the scrubbers is satisfactory. Therefore, parametric monitoring is not required and paragraph D.1.7(b) has been removed from the permit and Condition D.1.7 has been revised as follows:

~~(b) The Permittee shall record the gas or air flow rate across the combined dual cyclones used in conjunction with the two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, at least once daily when the two (2) synthetic fuel pellet production and curing operations are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the gas or air flow rate through the cyclone shall be maintained above 81,200 acfm or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.~~

Comment 5

On page 21 of 24, Emissions Unit Operation Conditions, Section D.1.8: Because the dual cyclones for each furnace are considered an integral part of the process, not control devices, failure detection parameters do not apply. This condition should apply to the scrubber. To clarify the equipment at the proposed facility, please modify this paragraph to read "In the event that ~~cyclone~~ **scrubber** failure has been . . . "

Response 5

Compliance does require parametric monitoring of the integral control device when venting to the atmosphere. Since the dual cyclones vent to the scrubbers, monitoring of the scrubbers is satisfactory. Therefore, failure detection is required only for the scrubbers and paragraph D.1.8 has been revised as follows:

D.1.8 Failure Detection

In the event that ~~cyclone~~ **scrubber** failure has been observed:

Comment 6

On page 21 of 24, Emissions Unit Operation Conditions, Section D.1.9(c): Because the dual cyclones for each furnace are considered an integral part of the process, not control devices, no parametric monitoring should be required. For this reason, delete the entire paragraph D.1.9(c);

Response 6

The dual cyclones each exhaust collectively through a scrubber. There is parametric monitoring for the scrubber in condition D.1.7. Due to the fact that the emissions travel through the scrubber <u>after</u> the cyclone, the parametric monitoring recordkeeping from condition D.1.9 is deleted. The changes to the permit are as follows:

~~(c) To document compliance with Condition D.1.7, the Permittee shall maintain the following as pertains to the cyclones:~~

~~(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:~~

~~(A) Air flow rate across the cyclones.~~

~~(2) Documentation of all response steps implemented, per event.~~

~~(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.~~

~~(4) Quality Assurance/Quality Control (QA/QC) procedures.~~

~~(5) Operator standard operating procedures (SOP).~~

~~(6) Manufacturer's specifications or its equivalent.~~

~~(7) Equipment "troubleshooting" contingency plan.~~

~~(8) Documentation of the dates vents are redirected.~~

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Construction Permit

Source Background and Description

Source Name: **PC Indiana Synthetic Fuels #2, LLC**
Source Location: **7244 Brammer Road, Lynnville, IN 47619**
County: **Warrick**
SIC Code: **2999**
Operation Permit No.: **173-10815-00041**
Permit Reviewer: **Phillip Ritz**

The Office of Air Management (OAM) has reviewed an application from PC Indiana Synthetic Fuels #2, LLC relating to the construction and operation of a modification to a synthetic fuel pellet production and curing operation.

New Emission Units and Pollution Control Equipment

The application includes information relating to the construction and operation of the following equipment:

(a) two (2) synthetic fuel pellet production and curing operations, identified as EP02a and EP02b, consisting of:

(1) two (2) liquid propane gas fired vibrating curing furnaces using natural gas as a backup fuel, identified as Dryers #1 and #2, respectively, each with a maximum capacity of 65 tons of pellets per hour, each with a rated heat input of 40 million British thermal units (MMBtu) per hour, each using one of two (2) cyclones as an integral part of the process, and exhausting collectively through one (1) scrubber to stack SV02a and SV02b, respectively;

(b) conveying for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons per hour, consisting of:

(1) one (1) pellet conveyor, one (1) dry pellet conveyor, one (1) loadout conveyor identified as EP01, EP03, and EP06, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;

(c) unloading for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons per hour, consisting of:

(1) two (2) collection hopper, identified as EP05 and EP07, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively, and
(2) one (1) truck loading operation, identified as EP08, with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively.

Permitted Emission Units and Pollution Control Equipment

The source also consists of the modification of the following permitted emission units and pollution control devices to increase the maximum capacities from 100 tons of pellets per hour to 130 tons of pellets per hour:

(a) conveying for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:

(1) two (2) feed bins with variable speed feed conveyors, one (1) feed conveyor, one (1) mixer feed conveyor, two (2) pugmill conveyors, one (1) mixer product conveyor, two (2) pellet mill feed conveyors, one (1) finished product collecting conveyor, one (1) tripper conveyor, one (1) underpile reclaim conveyor, one (1) feed conveyor, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;

(b) unloading for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:

(1) two (2) loading hoppers, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively;

(c) screening for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour, consisting of:

(1) one (1) plant protection screen, one (1) recycle material screen, one (1) plant protection screen, each with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively; and

(d) one (1) radial stacker, identified as EP04, for the synthetic fuel pellet production operations, with a maximum capacity of 130 tons of pellets per hour and exhausting fugitively.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) CP 173-9594I-00041, issued on May 12, 1998, and

(b) CP 173-9594-00041, issued on June 23, 1998.

All conditions from previous approvals were incorporated into this permit except the following:

(a) CP 173-9594-00041, issued on June 23, 1998

Condition 7:
NSPS Reporting Requirement
That pursuant to the New Source Performance Standard (NSPS), Part 60.250 through 60.254, Subpart Y, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

(a) Commencement of construction date (no later than 30 days after such date);

(b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

(c) Actual start-up date (within 15 days after such date); and

(d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM-OAM. The requirements of 40 CFR Part 60 are also federally enforceable.

Reason not incorporated:

CP 173-9594-00041 originally contained both Peabody Coal Company and PC Indiana Synthetic Fuel #2, LLC as contiguous sources. However, as the addendum to this permit states, these two sources are, in fact, separate. Since the coal mining and preparation operation at Peabody Coal Company are separate from the synthetic fuel pellet production and curing operation at PC Indiana Synthetic Fuel #2, LLC, Subpart Y does not apply to PC Indiana Synthetic Fuel #2, LLC.

(b) CP 173-9594-00041, issued on June 23, 1998

Condition 10: Opacity Limitations

That pursuant to the New Source Performance Standard (NSPS), Part 60.250 through 60.254, Subpart Y, on or after the date on which the performance test require to be conducted by 40 CFR Part 60.8 is completed, the emissions from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal shall not exceed 20 percent opacity.

Reason not incorporated:

CP 173-9594-00041 originally contained both Peabody Coal Company and PC Indiana Synthetic Fuel #2, LLC. However, as the addendum to this permit states, these two sources are, in fact, separate. Since the coal mining and preparation operation at Peabody Coal Company are separate from the synthetic fuel pellet production and curing operation at PC Indiana Synthetic Fuel #2, LLC, Subpart Y does not apply to PC Indiana Synthetic Fuel #2, LLC.

(c) CP 173-9594-00041, issued on June 23, 1998

Condition 15: Reagent Tank
The reagent tank (TK-1) is subject to the record keeping requirements of 40 CFR 60.116b(b). Pursuant to these requirements, the owner or operator shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the vessel.

Reason not incorporated:

CP 173-9594-00041 originally contained both Peabody Coal Company and PC Indiana Synthetic Fuel #2, LLC. However, as the addendum to this permit states, these two sources are, in fact, separate. Since the reagent tank (TK-1) is located at Peabody Coal Company, it is not included in this construction permit.

Source Definition

PC Indiana Synthetic Fuel #2, LLC will produce coal-based synthetic fuel pellets utilizing coal fines recovered from refuse impoundments at the Peabody Coal Company Lynnville Mine. As such, PC Indiana Synthetic Fuel #2, LLC will be located at the coal mine site.

As determined in Construction Permit 173-9594-00041, issued on June 23, 1998, Peabody Coal Company and PC Indiana Synthetic Fuel #2, LLC are considered separate sources for the following reasons:

(a) The sources are located on contiguous properties; and

(b) Information received from Peabody Coal Company indicates that PC Indiana Synthetic Fuel #2, LLC has purchased the land and coal fines slurry from Peabody coal Company. There is no contractual agreement between Peabody Coal Company and PC Indiana Synthetic Fuel #2, LLC. Peabody Coal Company produces 3,000,000 tons of coal per year, but only sends 1,000,000 tons (at maximum production rates) of coal slurry (which is not an output of Peabody Coal Company, rather, it is a by-product of Peabody Coal Company's coal production) to PC Indiana, where PC Indiana processes all of the 1,000,000 tons (at maximum production rates) of coal slurry per year and this is all of PC Indiana's total production. Based upon the source guidance form where one plant provides only 10% of its output to a second plant which is all of the second plant's output, there is not a support facility relationship. This removes the common control and support relationship though to have previously existed between these two companies. As such, Peabody Coal Company and PC Indiana Synthetic Fuel #2, LLC, are considered separate sources. Peabody Coal Company will continue to operate under their existing Source Specific Operating Agreement (SSOA) with the source ID# 173-00018 unaffected by the operating status of PC Indiana Synthetic Fuel #2. PC Indiana Synthetic Fuel #2, LLC is identified by source ID # 173-00041.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the two (2) cyclones be considered as an integral part of the drying and curing ovens:

(a) For curing, the pellets will be transported to one of the two proposed pellet curing dryers. The dryers are air-drying vibrating units. The fuel used will be liquid propane and /or natural gas. The fuel will be burned and forced through a plenum beneath the vibrating plate of the dryer and up through holes in the plate. This hot air rising through the pellets will create a fluidized bed of synthetic fuel pellets. The smaller fragments of the pelletized fuel will be entrained in air, at worst case, up to 10% of the dryer feed. The material entrained in the air is a useable product despite the fact that the size is not optimal, causing it to become entrained in the air

(b) The material will be discharged to the pellet collection conveyor and be combined with other pellets as a product. Due to the nature of the cyclonic collection units, they are an integral part of curing dryer process.

(c) The capital cost for the dual cyclones to be installed totals $188,000 for all cyclones. The operational cost is essentially zero as there are no moving parts. Therefore, using a ten-year live cycle and 6% interest, the annualized cost is estimated to be $33,667.

The additional revenue generated by the operation of the cyclones can also be calculated. The total loading to all cyclones is 13 tons per hour, with control efficiency of approximately 77%. Therefore approximately 10 tons per hour of product will be recovered each hour and sold at the current price of $20 per ton. This amounts to $200 per hour in increased sales, with a maximum potential of $1,752,000 per year in sales.

As indicated by the calculations, the annual benefit from the recovered material overwhelmingly exceeds the cost of the operation of the cyclones.

IDEM, OAM has evaluated the justifications and agreed that the two (2) cyclones will be considered as an integral part of the drying and curing ovens. Therefore, the permitting level will be determined using the potential to emit after the two (2) cyclones. Operating conditions in the proposed permit will specify that the two (2) cyclones shall operate at all times when the drying and curing ovens is in operation.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
EP02a	Two (2) identical stacks. One each for a synfuel pellet dryer control equipment consisting of dual cyclones and a wet scrubber.	50	5	81,200	107
EP02b		50	5	81,200	107

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 5, 1999, with additional information received on April 29, 1999.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (Appendix A, pages 1 through 6.)

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	30,235.34
PM-10	30,235.34
SO_2	0.21
VOC	1.93
CO	29.43
NO_x	70.83

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the emission data from Construction Permit issued on June 23, 1998.

Pollutant	Actual Emissions (tons/year)
PM	55.05
PM-10	55.05
SO_2	0.00
VOC	0.00
CO	0.00
NO_x	0.00
HAP	0.00

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
two (2) synthetic fuel pellet production and curing operations, (EP02a and EP02b)	66.40	66.40	0.21	1.93	29.43	70.83	0.00
Radial Stacker	5.69	5.69	0.00	0.00	0.00	0.00	0.00
Screens	5.07	5.07	0.00	0.00	0.00	0.00	0.00
Loading	2.91	2.91	0.00	0.00	0.00	0.00	0.00
Conveyors	40.81	40.81	0.00	0.00	0.00	0.00	0.00
Total Emissions	120.88	120.88	0.21	1.93	29.43	70.83	0.00

County Attainment Status

The source is located in Warrick County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Warrick County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Warrick County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	29.90
PM10	29.90
SO_2	0.00
VOC	0.00
CO	0.00
NO_x	0.00

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on the emissions summary Construction Permit issued on June 23, 1999.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_x (ton/yr)
Proposed Modification	120.90	120.90	0.01	1.00	14.70	35.40
PSD or Offset Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This modified source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) at least one of the criteria pollutant is greater than or equal to 100 tons per year,
(b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
(c) any combination of HAPs is greater than or equal to 25 tons/year.

This modified source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

Federal Rule Applicability

(a) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.250 through 60.253, Subpart Y), due to the type of operation at the source. This synthetic fuel pellet production and curing operation is not a coal preparation plant as it does not prepare coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the synthetic fuel pellet production and curing operation shall be limited by the following:

The allowable emissions for each facility are as follows:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

Emission Unit	Process Weight Rate (tons/hr)	Uncontrolled PM Emissions (lb/hr)	Control Efficiency %	Controlled PM Emissions (lb/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
synthetic fuel pellet production and curing operation, EP02a	65.00	3,445.00	99.78%	7.58	47.05
synthetic fuel pellet production and curing operation, EP02b	65.00	3,445.00	99.78%	7.58	47.05
Radial Stacker	130.00	0.01	0.00	0.01	53.95
Screens	130.00	0.01	0.00	0.01	53.95
Existing Loading	130.00	0.00	0.00	0.00	53.95
New Loading	130.00	0.00	0.00	0.00	53.95
Existing Conveyors	130.00	0.07	0.00	0.07	53.95
New Conveyors	130.00	1.95	0.00%	1.95	53.95

The synthetic fuel pellet production and curing operation utilizes wet scrubbers for particulate matter control on the synthetic fuel pellet production and curing operations identified as EP02a and EP02b to comply with 326 IAC 6-3-2 (Process Operations). The particulate matter emissions from the rest of the source are in compliance with 326 IAC 6-3-2 without any add on control equipment.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to this rule, the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM [326 IAC 6-4-5(c)].

326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations)

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on March 23, 1998. This plan consists of:

(a) wet suppression of dust from unpaved haul roads on an as needed basis.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

None of the listed air toxics will be emitted from this source.

Conclusion

The construction and operation of this modification to a synthetic fuel pellet production and curing operation shall be subject to the conditions of the attached proposed **Construction Permit 173-10815-00041.**

Appendix A: Emission Calculations

Company Name: PC Indiana Synthetic Fuels #2, LLC
Address City IN Zip: 7244 Brammer Road, Lynnville, IN 47619
MSOP: 173-10815-00041
Reviewer: Phillip Ritz/EVP
Date: March 26,1999

	Uncontrolled Potential Emissions (tons/year)							
	Emissions Generating Activity							
Pollutant	Synthetic Pellet Curing Facility	Increased Throughput of Radial Stacker	Increased Throughput of Screens	Increased Throughput of Loading	New Loading	Increased Throughput of Conveyors	New Conveyors	**TOTAL**
PM	30,180.86	5.69	5.07	1.20	1.71	32.27	8.54	30,235.34
PM10	30,180.86	5.69	5.07	1.20	1.71	32.27	8.54	30,235.34
SO2	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.21
NOx	70.83	0.00	0.00	0.00	0.00	0.00	0.00	70.83
VOC	1.93	0.00	0.00	0.00	0.00	0.00	0.00	1.93
CO	29.43	0.00	0.00	0.00	0.00	0.00	0.00	29.43
total HAPs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total emissions based on rated capacity at 8,760 hours/year.								
	Controlled Potential Emissions (tons/year)							
	Emissions Generating Activity							
Pollutant	Synthetic Pellet Curing Facility	Increased Throughput of Radial Stacker	Increased Throughput of Screens	Increased Throughput of Loading	New Loading	Increased Throughput of Conveyors	New Conveyors	**TOTAL**
PM	66.40	5.69	5.07	1.20	1.71	32.27	8.54	120.88
PM10	66.40	5.69	5.07	1.20	1.71	32.27	8.54	120.88
SO2	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.21
NOx	70.83	0.00	0.00	0.00	0.00	0.00	0.00	70.83
VOC	1.93	0.00	0.00	0.00	0.00	0.00	0.00	1.93
CO	29.43	0.00	0.00	0.00	0.00	0.00	0.00	29.43
total HAPs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total emissions based on rated capacity at 8,760 hours/year, after control.								

Appendix A
Synthetic Pellet Curing Facility
PC Indiana Synthetic Fuel # 2 - Calculation of Potential Emissions
<Based on maximum hourly production at 8,760 hours per year>

Company Name: PC Indiana Synthetic Fuels #2, LLC
Address City IN Zip: 7244 Brammer Road, Lynnville, IN 47619
MSOP: 173-10815-00041
Reviewer: Phillip Ritz/EVP
Date: March 26,1999

ID#	Source	Maximum Quantity Consumed (tons/hr)	Maximum Quantity Consumed (tons/yr)	Pollutant	Emission Factor (lbs/hr)	Emissions before control tons/yr	Control Efficiency %	Potential Emissions <tons per year>
EP02	2 Pellet Curing Dryers <tons of pellets>	130.00	1138800	**PM**	**53.00**	**30,178.20**	**0.9978**	**66.39**
	<see liquid propane emission calculations>			PM		2.24	0.9978	0.00
				PM-10		2.24	0.9978	0.00
				CO		11.93	0.0000	11.93
				SO2		0.07	0.0000	0.07
				NOx		**70.83**	**0.0000**	**70.83**
				VOC		1.86	0.0000	1.86
	<see natural gas emission calculations>			**PM**		**2.66**	**0.9978**	**0.01**
				PM-10		**2.66**	**0.9978**	**0.01**
				CO		**29.43**	**0.0000**	**29.43**
				SO2		**0.21**	**0.0000**	**0.21**
				NOx		35.04	0.0000	35.04
				VOC		**1.93**	**0.0000**	**1.93**

Pollutant	Emissions before control tons/yr	Control Efficiency %	Potential Emissions <tons per year>
PM	30,180.86	0.9978	66.40
PM-10	30,180.86	0.9978	66.40
CO	29.43	0.0000	29.43
SO2	0.21	0.0000	0.21
NOx	70.83	0.0000	70.83
VOC	1.93	0.0000	1.93

Appendix A
Increased throughput of Radial Sacker - PM Emissions

<Based on maximum hourly production at 8,760 hours per year>

ID#	Maximum Quantity Consumed (tons/hr)	Increased Throughput tons/yr	Emission Factor lbs/ton	Emissions before control tons/yr	Emissions before control lbs/hr	Control Efficiency %	Emissions after control tons/yr	Emissions after control lbs/hr
EP04 radial stacker	130.00	1138800	0.0100	5.69	1.30	0.00%	5.69	1.30
				5.69	**1.30**		**5.69**	**1.30**

Appendix A
Increased throughput of Screens -PM Emissions

<Based on maximum hourly production at 8,760 hours per year>

ID#	Maximum Quantity Consumed (tons/hr)	Increased Throughput tons/yr	Emission Factor lbs/ton	Emissions before control tons/yr	Emissions before control lbs/hr	Control Efficiency %	Emissions after control tons/yr	Emissions after control lbs/hr
Plant Production	144.56	1266346	0.0080	5.07	1.16	0.00%	5.07	1.16
				5.07	**1.16**		**5.07**	**1.16**

Appendix A
Increased throughput of Loading -PM Emissions

<Based on maximum hourly production at 8,760 hours per year>

Company Name: PC Indiana Synthetic Fuels #2, LLC
Address City IN Zip: 7244 Brammer Road, Lynnville, IN 47619
MSOP: 173-10815-00041
Reviewer: Phillip Ritz/EVP
Date: March 26,1999

ID#	Maximum Quantity Consumed (tons/hr)	Increased Throughput tons/yr	Emission Factor lbs/ton	Emissions before control tons/yr	Emissions before control lbs/hr	Control Efficiency %	Emissions after control tons/yr	Emissions after control lbs/hr
Loading Hopper	144.56	1266346	0.0010	0.63	0.14	0.00%	0.63	0.14
	130.00	1138800	0.0010	0.57	0.13	0.00%	0.57	0.13
				1.20	**0.27**		**1.20**	**0.27**

Appendix A
New Loading -PM Emissions

<Based on maximum hourly production at 8,760 hours per year>

ID#	Maximum Quantity Consumed (tons/hr)	Increased Throughput tons/yr	Emission Factor lbs/ton	Emissions before control tons/yr	Emissions before control lbs/hr	Control Efficiency %	Emissions after control tons/yr	Emissions after control lbs/hr
EP05 Collection Hopper	130.00	1138800	0.0010	0.57	0.13	0.00%	0.57	0.13
EP07 Collection Hopper	130.00	1138800	0.0010	0.57	0.13	0.00%	0.57	0.13
EP 08 Truck Loading	130.00	1138800	0.0010	0.57	0.13	0.00%	0.57	0.13
				1.71	**0.39**		**1.71**	**0.39**

Appendix A
Increased Throughput of Conveyors -PM Emissions

<Based on maximum hourly production at 8,760 hours per year>

ID#	Maximum Quantity Consumed (tons/hr)	Increased Throughput tons/yr	Emission Factor lbs/ton	Emissions before control tons/yr	Emissions before control lbs/hr	Control Efficiency %	Emissions after control tons/yr	Emissions after control lbs/hr
Feed bin feed	144.56	1266346	0.0100	6.33	1.45	50.00%	3.17	0.36
Feed bin feed	144.56	1266346	0.0100	6.33	1.45	50.00%	3.17	0.36
Feed	144.56	1266346	0.0100	6.33	1.45	50.00%	3.17	0.36
Mixer feed	144.56	1266346	0.0100	6.33	1.45	50.00%	3.17	0.36
Mixer product	153.05	1340709	0.0100	6.70	1.53	50.00%	3.35	0.38
Finished product	153.05	1340709	0.0100	6.70	1.53	50.00%	3.35	0.38
Pellet transfer	153.05	1340709	0.0100	6.70	1.53	50.00%	3.35	0.38
Tripper	153.05	1340709	0.0100	6.70	1.53	50.00%	3.35	0.38
Recycle material	153.05	1340709	0.0100	6.70	1.53	50.00%	3.35	0.38
Underpile reclaim	130.00	1138800	0.0100	5.69	1.30	50.00%	2.85	0.33
				64.54	**14.73**		**32.27**	**3.68**

Appendix A
New Conveyors -PM Emissions

<Based on maximum hourly production at 8,760 hours per year>

Company Name: PC Indiana Synthetic Fuels #2, LLC
Address City IN Zip: 7244 Brammer Road, Lynnville, IN 47619
MSOP: 173-10815-00041
Reviewer: Phillip Ritz/EVP
Date: March 26,1999

ID#	Maximum Quantity Consumed (tons/hr)	Increased Throughput tons/yr	Emission Factor lbs/ton	Emissions before control tons/yr	Emissions before control lbs/hr	Control Efficiency %	Emissions after control tons/yr	Emissions after control lbs/hr
EP01 Pellet conveyor	130.00	1138800	0.0100	5.69	1.30	50.00%	2.85	0.33
EP03 Dry pellet conveyor	130.00	1138800	0.0100	5.69	1.30	50.00%	2.85	0.33
EP 06 Loadout conveyor	130.00	1138800	0.0100	5.69	1.30	50.00%	2.85	0.33
				17.08	**3.90**		**8.54**	**0.98**

Appendix A: Emission Calculations
Natural Gas Combustion
MM Btu/hr 0.3 - < 100

Company Name: PC Indiana Synthetic Fuels #2, LLC
Address City IN Zip: 7244 Brammer Road, Lynnville, IN 47619
MSOP: 173-10815-00041
Reviewer: Phillip Ritz/EVP
Date: March 26,1999

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
80.0	700.8

Heat Input Capacity includes:
two (2) Natural Gas fired vibrating curing furnaces (40 mmBtu/hr each, 80 mmBtu/hr total)

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	2.66	2.66	0.21	35.04	1.93	29.43
Control Efficiency	1.00	1.00	0.00	0.00	0.00	0.00
Controlled Emission in tons/yr	0.01	0.01	0.21	35.04	1.93	29.43

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 50, Flue gas recirculation = 32
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 emis
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
LPG-Propane - Industrial Boilers
(Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)

Company Name: PC Indiana Synthetic Fuels #2, LLC
Address City IN Zip: 7244 Brammer Road, Lynnville, IN 47619
MSOP: 173-10815-00041
Reviewer: Phillip Ritz/EVP
Date: March 26,1999

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Weight % Sulfur =	0.18
80.00	7455.32		

Heat Input Capacity includes:
two (2) Natural Gas fired vibrating curing furnaces (40 mmBtu/hr each, 80 mmBtu/hr total)

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.60	0.60	0.02 *(0.10S)*	19.00	0.50	3.20
Potential Emission in tons/yr	2.24	2.24	0.07	70.83	1.86	11.93
Control Efficiency	0.998	0.998	0.00	0.00	0.00	0.00
Controlled Emission in tons/yr	0.00	0.00	0.07	70.83	1.86	11.93

Methodology

1 gallon of LPG has a heating value of 94,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.094 MMBtu

Emission Factors are from AP42, Fifth Edition (January 1995), Table 1.5-2 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton